

AMENDMENTS TO THE CLAIMS

The claims in this listing will replace all prior versions, and listings, of claims in the application.

1-35. (Cancelled)

36. (Currently Amended) A reception apparatus for a system in which wireless communication is ~~carried out using~~ performed by a plurality of antennas in both a transmission apparatus and the a reception apparatus, the reception apparatus comprising:

an electric field strength estimator ~~that estimates~~ configured to estimate an overall reception electric field strength of the system;

an eigenvalue calculator ~~that calculates~~ configured to calculate an eigenvalue corresponding to a channel matrix formed by channel estimation values;

an effective electric field strength calculator ~~that calculates~~ configured to calculate an effective reception electric field strength, the effective reception electric field strength comprising a reception electric field strength available for demodulation processing based on the eigenvalue;

a frame configuration controller ~~that controls~~ configured to control a parameter based on the overall reception electric field strength of the system and the effective reception electric field strength and ~~that transmits to~~ transmit information indicating the controlled parameter to the transmission apparatus; and

a receiver ~~that receives~~ configured to receive, at the plurality of antennas, a signal processed with the controlled parameter and transmitted by the transmission apparatus.

37. (Cancelled)

38. (New) A communication apparatus for a system in which wireless communication is performed by a plurality of antennas in communication apparatuses, the communication apparatus comprising:

an electric field strength estimator configured to estimate an overall reception electric field strength of the system;

an eigenvalue calculator configured to calculate an eigenvalue corresponding to a channel matrix formed by channel estimation values;

an effective electric field strength calculator configured to calculate an effective reception electric field strength, the effective reception electric field strength comprising a reception electric field strength available for demodulation processing based on the eigenvalue; and

a frame configuration controller configured to control a parameter based on the overall reception electric field strength of the system and the effective reception electric field strength and to transmit information indicating the controlled parameter to a transmission apparatus.

39. (New) A communication apparatus for a system in which wireless communication is performed by a plurality of antennas in communication apparatuses, the communication apparatus comprising:

a receiver configured to receive information indicating a parameter controlled at a communicating party based on an overall reception electric field strength of the system and an effective reception electric field strength;

a signal processor configured to process a signal using the information indicating the parameter; and

a transmitter configured to transmit the signal processed at the signal processor, to the communicating party from the plurality of antennas.

40. (New) A communication system in which wireless communication is performed using a plurality of antennas in communication apparatuses, the communication system comprising:

a first communication apparatus comprising:

an electric field strength estimator configured to estimate an overall reception electric field strength of the system;

an eigenvalue calculator configured to calculate an eigenvalue corresponding to a channel matrix formed by channel estimation values;

an effective electric field strength calculator configured to calculate an effective reception electric field strength, the effective reception electric field strength comprising a reception electric field strength available for demodulation processing based on the eigenvalue; and

a frame configuration controller configured to control a parameter based on the overall reception electric field strength of the system and the effective reception electric field strength and to transmit information indicating the controlled parameter to a second communication apparatus; and

the second communication apparatus comprising:

a receiver configured to receive information indicating the parameter transmitted from the first communication apparatus;

a signal processor configured to process a signal using the information indicating the parameter; and

a transmitter configured to transmit the signal processed at the signal processor, to the first communication apparatus from the plurality of antennas.